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and Company, Legal Patent Records Center, 1007 Market
Street, Wilmington, DE 19898 (US).

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PONT DE NEMOURS AND COMPANY [US/US]; 1007
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(72) Inventors; and

(75) Inventors/Applicants (for US only): CAHOON, Re-
becca, E. [US/US]; 2331 W. 18th Street, Wilmington, DE
19806 (US). LOWE, Keith [US/US]; 6407 Harbor Oaks
Drive, Johnston, IA 50121 (US).

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[Continued on next page]

(54) Title: WUSCHEL (WUS) GENE HOMOLOGS

SEQ ID NO:04
SEQ ID NO:10
SEQ ID NO:20
SEQ ID NO:22
SEQ ID NO:24
SEQ ID NO:25

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*      *      *****      *      *****      *
MEALS-----
MEG-----GLSPERHAAAE-----
MESHS-----
MKVHQFARGF-WEHEPSLTGCKRLRPLAPKLSNTDTISPPHHPVTTFDLKSFIKPESAS
MKVHQFTRGLIWEHEPFLTGCKRLRPLAPKLPNTKTITTP-----FDLKSFIKPESGP
MEPPQHQH-----HHH-----
1                                     60

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SEQ ID NO:04
SEQ ID NO:10
SEQ ID NO:20
SEQ ID NO:22
SEQ ID NO:24
SEQ ID NO:25

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**      *      *      *      *      *
-----G-----RVGVKC-----GRWNPTAEQVKVLTLEF-RAGLRTPSTEQ
-----PVRSRWTPKPEQILILESIF-NSGMVNPPKDE
-----SDAEAEENVRTHSSV-----SRWSPTKEQIDMLENLY-KQGIRTPSTEQ
RKLIGIGSSDDNTNKRDPSSPQQAETHIPGGTRWNPTQEIGILEMLY-RGGMRTPNAQQ
RK-----PVSSDDTKKDPSPQGIETH-PGGTRWNPTQEIGILEMLY-KGGMRTPNAQQ
-----QADQESGNNNNKSGSGGYTCR-QTSTRWTPTEQIKILKELYNNNAIRSPADQ
61                                     120

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SEQ ID NO:04
SEQ ID NO:10
SEQ ID NO:20
SEQ ID NO:22
SEQ ID NO:24
SEQ ID NO:25

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*      *      *      *****      *
IQRISTHLSAFGKVESKNVFWFQNHKARERHHK-KRRRGASSSSPDGSGRGSNNEED
TVIRKLLERFAGVDANVFYWFQNRSSRRRQRLQAQAAASSSSGSPPTSGLAPGH
IQQITSRLRAYGHIEGKNVFWFQNHKARQKLM-KQQTIAYSNR-----FLRASHPICQ
IEQITAQLSKYGGKIEGKNVFWFQNHKARERQKQ--KRNNLGLAHSPTTLTSPFSC-
IEQITVQLGKYGGKIEGKNVFWFQNHKARERQKQ--KRSSLASSHSPTPTIHS-----
IQKITARLRQFGKIEGKNVFWFQNHKARERQKRFNGTNTMTSPSSPNVMAANDHYH
121                                     180

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(57) Abstract: This invention relates to an isolated nucleic acid fragment encoding a WUS protein. The invention also relates to the construction of a chimeric gene encoding all or a portion of the WUS protein, in sense or antisense orientation, wherein expression of the chimeric gene results in production of altered levels of the WUS protein in a transformed host cell.

WO 01/23575 A3



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/26648

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/29 C07K14/415 C12N15/82 C12N5/10 C12N15/63
A01H5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	MAYER ET AL.: "Role of WUSCHEL in regulating stem cell fate in the Arabidopsis shoot meristem" CELL, vol. 95, 11 December 1998 (1998-12-11), pages 805-815, XP000982656 the whole document --- -/--	1-35

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

7 March 2001

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040. Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

CEDER O.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/26648

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE LA BASTIDE ET AL.: "wuschel protein - Arabidopsis thaliana" PIR2 SEQUENCE DATA BASE, 12 February 1999 (1999-02-12), XP002162288 Ac T00829 the whole document	1-5,16
A	-& DE LA BASTIDE ET AL.: "Arabidopsis thaliana BAC T13L16 from chromosome II, near 33 cM, complete sequence" NCBI DATABASE,9 January 1999 (1999-01-09), XP002162289 Ac AC003952 the whole document	1-5,16
A	LAUX ET AL.: "The WUSCHEL gene is required for shoot and floral meristem integrity in Arabidopsis" DEVELOPMENT, vol. 122, 1996, pages 87-96, XP002162290 cited in the application	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 00/26648

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-35 ALL PARTIALLY

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-35 all partially

Isolated polynucleotides and polypeptides for the wuschel protein from corn (i.e. Seq Id Nos 1-14) and their uses.

2. Claims: 1-35 all partially he

Isolated polynucleotides and polypeptides for the wuschel protein from soybean (i.e. Seq Id Nos 15-24) and their uses.